

CLAIMS

[30030685]

1. A method of testing automatic path protection switching in a synchronous optical network, comprising:
 - 5 defining test message data;
 - incorporating the test message data into a sequence of trace octets embedded in synchronous optical data frames, said trace octets comprising at least one of section trace, path trace and lower-order path trace sequences;
 - transmitting the synchronous optical data frames over a synchronous optical path to
10 be tested;
 - receiving the synchronous optical data frames after they have traversed the synchronous optical path;
 - extracting the incorporated test message data; and
 - comparing the extracted test message data with the defined test message data to test
15 automatic path protection switching of the synchronous optical path.
2. The method of claim 1, wherein the step of defining test message data comprises adopting data inserted by user applications in the trace octets as the test message data.
- 20 3. The method of claim 1, wherein the step of defining test message data comprises receiving trace messages incorporated in synchronous optical data frames and editing the received trace messages to define the test message data.
4. Apparatus for testing automatic path protection switching in a synchronous optical
25 network, comprising:
 - a message definer for defining test message data and incorporating the test message data into a sequence of trace octets embedded in synchronous optical data frames, said trace octets comprising a selected one of section trace, path trace and lower-order path trace sequences;
 - 30 a transmitter for transmitting the synchronous optical data frames over a synchronous optical path to be tested;
 - a receiver for receiving the synchronous optical data frames after they have traversed the synchronous optical path; and
 - a comparator for extracting the incorporated test message data and comparing the
35 extracted test message data with the defined test message data to test automatic path protection switching of the synchronous optical path.